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APPLICATION NO.	FILING DATE	FIRST-NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,524	06/20/2000	Harry J. Beatty, III	FIS9-1999-0319-US1	5261
29505	7590	02/13/2006	EXAMINER	
DELIO & PETERSON, LLC 121 WHITNEY AVENUE NEW HAVEN, CT 06510			ALI, SYED J	
			ART UNIT	PAPER NUMBER
			2195	

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/597,524

Applicant(s)

BEATTY, III ET AL.

Examiner

Syed J. Ali

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-9 and 11-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9 and 11-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment filed November 4, 2005. Claims 1-5, 7-9, and 11-15 are presented for examination.
2. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Response to Amendment

3. **The affidavit filed on November 4, 2005 under 37 CFR 1.131 is sufficient to overcome the Sievert et al. (USPN 6,832,376) reference.**

Claim Rejections - 35 USC § 103

4. **Claims 1-5, 7-9, and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jagannathan et al. (USPN 5,692,193) (hereinafter Jagannathan) in view of Ault et al. (USPN 6,085,217) (hereinafter Ault).**
5. As per claim 1, Jagannathan teaches the invention as claimed, including a method of parallel processing in a memory structure comprising:

creating a first thread in the memory structure which represents an independent flow of control managed by a program structure (col. 13 lines 35-43), said first thread having two states, a first state processing work for the program structure (Fig. 4 elements 50, 52, 54) and a second state undispatched awaiting work to process (Fig. 4 element 48); and

using the program structure to destroy the first thread in the memory structure after the first thread completes a desired amount of work (col. 13 line 67 - col. 14 line 2).

6. Ault teaches the invention as claimed, including providing a second thread in the memory structure which represents an independent flow of control managed by a program structure separate from the first thread (col. 3 lines 30-35);

using the second thread to prepare work for the first thread to process (col. 4 lines 32-45);

placing the work prepared by the second thread in a queue for processing by the first thread (col. 5 line 66 - col. 6 line 8);

if the first thread is awaiting work to process when the work prepared by the second thread is placed in the queue, dispatching the first thread and using it to process the work in the queue (col. 6 lines 42-51); and

if the first thread is processing other work when the work prepared by the second thread is placed in the queue, using the first thread to complete processing of the other work, access the work in the queue, and then process the work in the queue (col. 6 lines 58-64).

7. It would have been obvious to a person having ordinary skill in the art to use the method of queuing work items described by Ault within the multithreading model of Jagannathan since it allows a system to organize and manage incoming work requests in a stable and reliable manner (Ault, col. 2 lines 19-24).

8. As per claim 2, Ault teaches the invention as claimed, including the method of claim 1 wherein the second thread continues to place additional work in the queue (col. 4 lines 55-57),

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and the first thread sequentially processes the additional work in the queue as it completes processing prior work (col. 8 lines 58-64).

9. As per claim 3, Ault teaches the invention as claimed, including the method of claim 1 wherein the second thread marks the work placed in the first thread queue as not complete (col. 5 line 66 - col. 6 line 21).

10. As per claim 4, Ault teaches the invention as claimed, including the method of claim 1 wherein if the first thread is processing other work when the work prepared by the second thread is placed in the queue, and when the first thread completes processing of the work in the queue, using the first thread to mark the completed work as complete, wherein subsequent work from the second thread is made to wait until the previous work in the first thread is marked complete (col. 8 lines 58-64).

11. As per claim 5, Jagannathan teaches the invention as claimed, including the method of claim 1 wherein the first thread is reused to process other work before being destroyed (col. 13 line 67 - col. 14 line 2).

12. As per claims 7-9 and 11-15, the same limitations are presented as those in claim group 1-5. Accordingly, Jagannathan teaches the invention as claimed, as discussed above in numbered paragraphs 6-10.


Conclusion

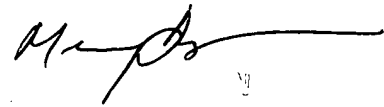
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chopra et al. (USPN 6,167,423) discusses well known techniques of queuing work in a multithreaded environment. Messages are enqueued for worker threads, which dequeue the work items and perform the necessary processing. Concurrency techniques ensure are used to ensure isolation of work threads.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed J. Ali whose telephone number is (571) 272-3769. The examiner can normally be reached on Mon-Fri 8-5:30, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai T. An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Syed Ali
February 2, 2006


SUPERVISOR
TECHNICAL
EXAMINER
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